WHAT IS CLAIMED IS:

1. A floating weir assembly for removing fluid from a vessel containing a fluid having a surface, comprising

a) buoyancy means and

b) a fluid inlet affixed to the buoyancy means and having a weir opening to the fluid in the vessel, the weir opening being positioned such that at least a portion of the weir opening is submerged in the fluid when the floating weir assembly floats in the fluid and the weir opening being vertically adjustable with respect to the surface of the fluid in a vessel containing the floating weir assembly such that the portion of the weir opening that is submerged is controllable through vertical adjustment of the weir opening, and wherein the fluid inlet has an exit opening for connection to a fluid outlet from the vessel.

2. The floating weir assembly of claim 1, further comprising a fluid path for connecting the exit opening in fluid communication to a fluid outlet from the vessel, wherein the rate of flow of the fluid from the vessel through the floating weir assembly is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

3. The floating weir assembly of claim 2, wherein the fluid path is gravity-fed.

4. The floating weir assembly of claim 2, wherein the fluid path is an open-channel system.

5. The floating weir assembly of claim 2, wherein the buoyancy means provides a buoyancy of at least 3 times the weight of the floating weir assembly.

6. The floating weir assembly of claim 1 wherein the buoyancy means includes a gas-filled container or a polymer foam.

7. A vessel for containing a fluid having a floating weir assembly of claim 1 disposed within the vessel, wherein the fluid inlet of the floating weir assembly is in fluid communication with a fluid outlet from the vessel, such that the rate of flow of the fluid from the vessel through the floating weir assembly when the floating weir assembly is floated by the fluid in the vessel is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

8. The vessel of claim 7 further comprising means for maintaining the floating weir assembly in a desired orientation within the vessel.

9. The vessel of claim 7 further comprising means for maintaining the floating weir assembly in a desired horizontal position within the vessel.

10. The vessel of claim 7, wherein the rate of flow of the fluid into the fluid inlet through the weir opening is independent of the level of fluid in the vessel when the floating weir assembly is floated by the fluid.

11. The vessel of claim 7, further comprising means for adjusting ballast in response to changes in the level of the fluid in the vessel, such that the rate of flow of the fluid into the fluid inlet through the weir opening adjusts with changes in the level of the fluid.

12. The vessel of claim 7, wherein the vessel is a rainwater detainment vessel.

13. The vessel of claim 7, wherein the vessel is an irrigation channel and the fluid outlet is in liquid communication with an irrigation system.

14. A method of controlling the rate of flow of a fluid from a vessel, in which the vessel contains a floating weir assembly of claim 1 that is floating on the surface of a fluid in the vessel, and the fluid inlet of the floating weir assembly is in fluid communication with a fluid outlet from the vessel, such that the rate of flow of

the fluid from the vessel is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

15. The method of claim 14, wherein the rate of flow of the fluid into the fluid inlet through the weir opening is independent of the level of fluid in the vessel when the floating weir assembly is floated by the fluid.

16. The method of claim 14, further comprising means for adjusting ballast in response to changes in the level of the fluid in the vessel, such that the rate of flow of the fluid into the fluid inlet through the weir opening adjusts with changes in the level of the fluid.

17. A floating weir assembly for removing fluid from a vessel containing a fluid having a surface, comprising

a) buoyancy means and
b) a fluid inlet affixed to said buoyancy means such that a weir opening of the fluid inlet is maintained at a predetermined position relative to the surface of the fluid in the vessel and is at least partially submerged when the floating weir assembly floats in the fluid in the vessel, and wherein the fluid inlet has an exit opening for connection to a fluid outlet from the vessel.

18. The floating weir assembly of claim 17, further comprising a fluid path for connecting the exit opening in fluid communication to a fluid outlet from the vessel, wherein the rate of flow of the fluid from the vessel through the floating weir assembly is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

19. The floating weir assembly of claim 18, wherein the fluid path is gravity-fed.

20. The floating weir assembly of claim 18, wherein the fluid path is an open-channel system.

21. The floating weir assembly of claim 18, wherein the buoyancy means provides a buoyancy of at least 3 times the weight of the floating weir assembly.

22. The floating weir assembly of claim 17 wherein the buoyancy means includes a gas-filled container or a polymer foam.

23. The floating weir assembly of claim 17, wherein the weir opening is entirely submerged when the floating weir assembly is floating on a fluid in the vessel.

24. The floating weir assembly of claim 23, further comprising adjustment means for adjusting the rate of flow of the fluid through the weir opening.

25. The floating weir assembly of claim 24, wherein the adjustment means is selected from means to adjust the weir opening size and means to adjust the position of the weir opening relative to the surface of the fluid.

26. The floating weir assembly of claim 17, wherein a portion of the weir opening is submerged when the floating weir assembly is floating on a fluid in the vessel.

27. The floating weir assembly of claim 26, further comprising adjustment means for adjusting the rate of flow of the fluid through the weir opening.

28. The floating weir assembly of claim 27, wherein the adjustment means are selected from means to adjust the weir opening size, means for adjusting the buoyancy provided by the buoyancy means, and means to adjust the position of the weir opening relative to the surface of the fluid.

29. A vessel for containing a fluid having a floating weir assembly of claim 13 disposed within the vessel, wherein the fluid inlet of the floating weir assembly is in fluid communication with a fluid outlet from the vessel, such that the rate of flow of the fluid from the vessel through the floating weir assembly when the floating

weir assembly is floated by the fluid in the vessel is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

30. The vessel of claim 29 further comprising means for maintaining the floating weir assembly in a desired orientation within the vessel.

31. The vessel of claim 29 further comprising means for maintaining the floating weir assembly in a desired horizontal position within the vessel.

32. The vessel of claim 29, wherein the vessel is a rainwater detainment vessel.

33. The vessel of claim 29, wherein the vessel is an irrigation channel and the fluid outlet is in liquid communication with an irrigation system.

34. A method of controlling the rate of flow of a fluid from a vessel, in which the vessel contains a floating weir assembly of claim 17 that is floating on the surface of a fluid in the vessel, and the fluid inlet of the floating weir assembly is in fluid communication with a fluid outlet from the vessel, such that the rate of flow of the fluid from the vessel is limited by the rate of flow of the fluid into the fluid inlet through the weir opening.

35. The method of claim 34, wherein the rate of flow of the fluid into the fluid inlet through the weir opening is independent of the level of fluid in the vessel when the floating weir assembly is floated by the fluid.